

REMARKS

In response to the Office Action dated April 14, 2009, claims 1, 4, 7, 11, 12, 18 and 20 have been amended. Claims 1-18 and 20-23 are pending in the application.

In paragraph 4 on page 3 of the Office Action, claims 1-15 and 18-23 were rejected under 35 U.S.C. § 103(b) as being unpatentable over Eyer in view of Hendricks and in further view of Chaney.

In paragraph 5 on page 14 of the Office Action, claims 16 and 17 were rejected under 35 U.S.C. § 103(b) as being unpatentable over Eyer in view of Hendricks and in further view of Chaney, and in further view of McLaren.

Applicant respectfully traverses the rejection, but in the interest of expediting prosecution has amended claims.

Independent claim 1 sets forth a plurality of encoding units each operative to receive a plurality of IPQ pages, audio input and data input, wherein each of the plurality of IPQ pages include a guide portion and a video portion, and to generate a plurality of guide streams and at least one of a video stream, an audio stream and a data stream, wherein each generated stream is assigned a respective packet identifier (PID), at least one transport stream generator operatively coupled to the plurality of encoding units and assigned to a distribution node, each transport stream generator operative to receive the generated streams from one or more of the plurality of encoding units and multiplexing packets from the received streams into one or more transport streams, a session manager coupled to the at least one transport stream generator and the plurality of encoding units, the session manager being operative to manage the operation of the plurality of encoding units and the at least one transport stream generator and to service demands of the distribution node and

a bandwidth manager, coupled to the at least one transport stream generator for monitoring resources usage and availability for encoding by the plurality of encoding units, the bandwidth manager, in response to a demand from the distribution node, obtains information regarding whether sufficient bandwidth and PIDs are available in the one or more transport streams being transmitted to the distribution node to service the demand and communicates the obtained information to the session manager for servicing the demand. Independent claims 18 and 20 include similar elements.

In contrast Eyer merely describes MPEG-2 encoders 220, 230 which encode audio/video sources with IPG data. The encoded data from each of the MPEG-2 encoders 220, 230 is multiplexed to form a signal.

However, Eyer does not disclose receiving a plurality of IPQ pages, audio input and data input, wherein each of the plurality of IPQ pages include a guide portion and a video portion. Eyer merely discloses receiving IPG data.

Eyer further does not disclose generating a plurality of guide streams and at least one of a video stream, an audio stream and a data stream, wherein each generated stream is assigned a respective packet identifier (PID). Eyer fails to even mention generating a plurality of guide streams and at least one of a video stream, an audio stream and a data stream.

Eyer also does not disclose a transport stream generator operative to receive the generated streams from one or more of the plurality of encoding units and multiplexing packets from the received streams into one or more transport streams. Eyer fails to even mention receive the generated streams from one or more of the plurality of encoding units and multiplexing packets from the received streams into one or more transport streams.

Eyer does not disclose a session manager operative to manage the operation of the plurality of encoding units and the at least one transport stream generator and to service demands of the distribution node. Eyer does not disclose a bandwidth manager for monitoring resources usage and availability for encoding by the plurality of encoding units.

Eyer further does not disclose a bandwidth manager that, in response to a demand from the distribution node, obtains information regarding whether sufficient bandwidth and PIDs are available in the one or more transport streams being transmitted to the distribution node.

Thus, Eyer fails to disclose, teach or suggest the invention as defined in independent claims 1, 18 and 20, as amended.

Hendricks fails to overcome the deficiencies of Eyer. Hendricks merely discloses a cable headend 208 that performs two primary functions. First, the cable headend **208** acts as a distribution center, or signal processor, by relaying the program signal to the set top terminal **220** in each subscriber's home. In addition, the cable headend 208 acts as a network controller 214 by receiving information from each set top terminal 220 and passing such information on to an information gathering site such as the operations center 202. The network controller 214 is also able to respond to the immediate needs of a set top terminal 220 by modifying a program control information signal received from the operations center 202. Thus, the network controller 214 is able to perform "on the fly" programming" changes. With this capability, the network controller 214 can handle sophisticated local programming needs such as, for example, interactive television services, split screen video, and selection of different foreign languages for the same video.

Hendricks also discloses a menu drive scheme to navigate. A computer assisted packaging system (CAP) 260 is used to retrieve viewer data, and assimilates that data into the program packaging method. Raw data is retrieved from the set top terminals and filtered. Each headend 208 compiles the viewer data, and then sends it verbatim to the operations center 202. Once the raw data is assembled at the operations center 202, the data is filtered for each application. To divide tasks among multiple operations centers, specific satellite transponders are assigned to each operations center 202. Programming is grouped into priority levels with each priority level assigned specific satellite transponders.

Accordingly, Hendricks merely describes obtaining data from a subscriber's set-top box that may be used to change programming.

However, Hendricks does not disclose receiving a plurality of IPQ pages, audio input and data input, wherein each of the plurality of IPQ pages include a guide portion and a video portion. Hendricks further does not disclose generating a plurality of guide streams and at least one of a video stream, an audio stream and a data stream, wherein each generated stream is assigned a respective packet identifier (PID). Hendricks fails to even mention generating a plurality of guide streams and at least one of a video stream, an audio stream and a data stream.

Hendricks also does not disclose a transport stream generator operative to receive the generated streams from one or more of the plurality of encoding units and multiplexing packets from the received streams into one or more transport streams. Hendricks fails to even mention receive the generated streams from one or more of the plurality of encoding units and multiplexing packets from the received streams into one or more transport streams.

Hendricks does not disclose a session manager operative to manage the operation of the plurality of encoding units and the at least one transport stream generator and to service demands of the distribution node. Hendricks does not disclose a bandwidth manager for monitoring resources usage and availability for encoding by the plurality of encoding units.

Hendricks further does not disclose a bandwidth manager that, in response to a demand from the distribution node, obtains information regarding whether sufficient bandwidth and PIDs are available in the one or more transport streams being transmitted to the distribution node.

Thus, Eyer and Hendricks, alone or in combination, fail to disclose, teach or suggest the invention as defined in independent claims 1, 18 and 20, as amended.

Chaney fails to overcome the deficiencies of Eyer and Hendricks. Chaney merely discloses that program guide information is formed as a master guide and a special guide. Chaney further discloses a scheduler for generating a list of packet A/V programs including information relating to transmission times, program identifiers, and miscellaneous information related to respective packet A/V programs. The scheduler generates the master guide packet signal the special guide packet signal. The master guide packet signal is multiplexed with respective the packet A/V programs on substantially every channel, and the special guide is multiplexed with A/V programs on only one of said channels.

Accordingly, Chaney does not disclose assigning an identifier to packets so that a demultiplexor can extract elementary streams from a transport stream. Moreover, Chaney does not disclose receiving a plurality of IPQ pages, audio input and data input, wherein each of the plurality of IPQ pages include a guide portion and a video portion. Chaney merely discloses that the guides may be comprised of segments.

Chaney further does not disclose a transport stream generator operative to receive the generated streams from one or more of the plurality of encoding units and multiplexing packets from the received streams into one or more transport streams. Chaney fails to even mention receive the generated streams from one or more of the plurality of encoding units and multiplexing packets from the received streams into one or more transport streams.

Chaney does not disclose a session manager operative to manage the operation of the plurality of encoding units and the at least one transport stream generator and to service demands of the distribution node. Further, Chaney does not disclose a bandwidth manager for monitoring resources usage and availability for encoding by the plurality of encoding units.

Chaney also fails to disclose a bandwidth manager that, in response to a demand from the distribution node, obtains information regarding whether sufficient bandwidth and PIDs are available in the one or more transport streams being transmitted to the distribution node.

Thus, Eyer, Hendricks and Chaney , alone or in combination, fail to disclose, teach or suggest the invention as defined in independent claims 1, 18 and 20, as amended.

McLaren fails to overcome the deficiencies of Eyer, Hendricks and Chaney. McLaren is merely cited as disclosing a slice-based encoding scheme and a picture-based encoding scheme. However, McLaren fails to suggest receiving a plurality of IPQ pages, audio input and data input, wherein each of the plurality of IPQ pages include a guide portion and a video portion. McLaren further does not disclose generating a plurality of guide streams and at least one of a video stream, an audio stream and a data stream, wherein each generated stream is assigned a respective packet identifier (PID). McLaren

fails to even mention generating a plurality of guide streams and at least one of a video stream, an audio stream and a data stream.

McLaren also fails to mention a transport stream generator that is operative to receive the generated streams from one or more of the plurality of encoding units and multiplexing packets from the received streams into one or more transport streams. McLaren also does not disclose a session manager operative to manage the operation of the plurality of encoding units and the at least one transport stream generator and to service demands of the distribution node. Still further, McLaren does not disclose a bandwidth manager for monitoring resources usage and availability for encoding by the plurality of encoding units.

Even further, McLaren fails to disclose a bandwidth manager that, in response to a demand from the distribution node, obtains information regarding whether sufficient bandwidth and PIDs are available in the one or more transport streams being transmitted to the distribution node.

Thus, Eyer, Hendricks, Chaney and McLaren, alone or in combination, fail to disclose, teach or suggest the invention as defined in independent claims 1, 18 and 20, as amended.

Dependent claims 2-17 and 21-23 are also patentable over the references, because they incorporate all of the limitations of the corresponding independent claims 1 and 20, respectively. Further dependent claims 2-17 and 21-23 recite additional novel elements and limitations. Applicants reserve the right to argue independently the patentability of these additional novel aspects. Therefore, Applicants respectfully submit that dependent claims 2-17 and 21-23 are patentable over the cited references.

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Reply to Office Action of April 14, 2009
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On the basis of the above amendments and remarks, it is respectfully submitted that the claims are in immediate condition for allowance. Accordingly, reconsideration of this application and its allowance are requested.

If a telephone conference would be helpful in resolving any issues concerning this communication, please contact Attorney for Applicant, David W. Lynch, at 865-380-5976. If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies, to charge payment or credit any overpayment to Deposit Account No. 13-2725 for any additional fee required under 37 C.F.R. §§ 1.16 or 1.17; particularly, extension of time fees.

Respectfully submitted,

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